170023

70

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

BY TELEFAX

REPLY TO THE ATTENTION OF:
5HS-11

February 12, 1990

Peter Vagt
Warzyn Engineering Inc.
2100 Corporate Drive
Addison, Illinois 60101

RE: QAPP Comments ACS Site

Dear Peter:

Attached to this letter, are QAS' latest comments concerning the QAPP addendum for the Phase II RI work at the ACS site. As part of his review, Dr. Tsai has provided me with the standard Regional organic substance SOPs for low detection limit residential well analysis. He informed me that the SOPs provided with his comments (i.e., those for VOCs, Pesticide/PCBs and semi-volatiles), can be inserted in your revised QAPP and will be approved as substitutes for the current SOPs included in the QAPP addendum, provided that the laboratory follow QAS' SOPs exactly as written. Otherwise, the SOPs should be revised per Dr. Tsai's comments. If you want to view the Region's SOPs for organic anlaysis for residential wells, please contact me and I will forward them to you.

Sincerely,

Robert E. Swale
Remedial Project Manager

Attachment

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:

5SMQA

MEMORANDUM

DATE: FEB 08 1990

SUBJECT: Review of the First Revision, PRP-Lead Quality Assurance Project Plan for Phase II Remedial Investigation/Feasibility Study Activity at the American Chemical Services Site in Griffith, Indiana

FROM: James H. Adams, Jr., Chief
Quality Assurance Section

TO: James Mayka, Chief
Illinois/Indiana Section

ATTENTION: Robert Swale, RPM

We have reviewed the first revision, PRP-Lead Quality Assurance Project Plan (QAPjP) for Phase II Remedial Investigation/Feasibility Study (RI/FS) activities at the American Chemical Services (ACS) site in Griffith, Indiana, Which was received by the Quality Assurance Section (QAS) on January 2, 1990 (QAS Log-In No. 1120). This subject QAPjP is not approvable because most of the required Standard Operating Procedures (SOPs) are not acceptable. This subject QAPjP will not be approved until deficiencies listed in this memorandum are properly addressed.

Our comments on the current QAPjP are summarized as follows:

I. SOP for Low Detection Limits - Volatile Organics

A. The first 12 pages, which cover the internal laboratory operations such as creating file name, etc., shall not be part of the SOP, and shall be deleted.

B. The following deficiencies shall also be corrected:

1. The concentration of stock standard solutions shall be specified. It is not acceptable to identify the specific standard solution in terms of the laboratory code number (i.e., Standard #349). If it is necessary to use the laboratory code for the convenience of daily laboratory operation, we suggest that the actual concentration of that solution be identified in a parenthesis - for example,

solution #4000 (200 ug/L).

2. It is stated under "Standard Preparation" in page 3 of 10, that two 10 ml syringes will be used to deliver 20 ml of standards and samples into the purging device. This is not acceptable. We require that a 20- or 25 ml syringe shall be used.

3. Under "SPCC Criteria" in page 5 of 10, it is stated that the SPCC criteria for bromoform and 1,1,2,2-tetrachloroethane are waived for this analysis. This is not acceptable. The bromoform and 1,1,2,2-tetrachloroethane shall not be waived. The Relative Response Factor (RRF) for these two compounds shall be at least 0.150. Please make the same correction in page 8 of 10.

4. In page 5 of 10, the criteria for the continuing calibration check shall be revised as follows:

   a. The Percent Relative Difference (%RPD) for any compounds shall not be greater than 25% of the initial calibration.

   b. The standard solution used for continuing calibration check shall include all compounds of interest at concentration of 20 ug/L.

   c. The continuing calibration check shall be done daily at the beginning of the day before analysis of any samples, and at the beginning of each 12-hour shift.

5. In page 8 of 10, under "Sample Preparation", the 10-ml syringe shall be replaced with 20- or 25-ml of syringe.

6. A separate section shall be added to address the criteria to be used for the qualitative identification of compounds.

7. The frequency of analyzing method blank and continuing calibration check standards shall be specified.

8. Attachment 1 shall be revised to include the actual quantitation limits the responsible laboratory can achieve.

9. The level of matrix spike and surrogate spike shall be done at concentrations of 20 ug/L.

C. Use the attached SOP example as reference to revise this SOP.

II. SOP for Low Detection Limits - Extractables

A. Please identify the actual concentrations of each spike and surrogate

standard solutions. See comment I-B-1 of this memo.

B. The concentration of the surrogate spike and matrix spike shall be done at 20 ug/L for base/neutral compounds and 40 ug/L for acids. Please address them.

C. A table listing the target compounds along with the required detection limits shall be included in the SOP.

D. The required quality control, which includes the analysis of method blank, matrix spike/matrix spike duplicate, continuing calibration check, and their frequencies shall be properly addressed.

E. A separate section shall be added to address the criteria to be used for the qualitative identification of compounds.

F. See Comment I-C of this memo.

III. SOP for Low Detection Limits - Pesticides/PCBs

A. Please identify the actual concentrations of each spike and surrogate standard solutions. See comment I-B-1 of this memo.

B. The concentration of the surrogate spike shall be done at 0.2 ug/L. Please address them.

C. The level of matrix spike shall be done as follows:

Compound	Concentration (ug/L)
Lindane	0.04
Heptachloro	0.04
Aldrin	0.04
Dieldrin	0.10
Endrin	0.10
4,4'-DDT	0.10

D. The required quality control, which includes the analysis of method blank, matrix spike/matrix spike duplicate, calibration check,and their frequencies shall be properly addressed.

E. A analysis sequency including the steps of calibrations, calibration checks, shall be addressed.

F. Please provide the procedure to be used to quantify the PCBs.

G. A table listing the target compounds along with the required detection limits shall be included in the SOP.

H. A separate section shall be added to address the criteria to be used for the qualitative identification of compounds.

I. See comment I-C of this memo.

IV. SOP for Alkalinity

A. The procedure, including the equation, to be used for calculating the analytical results shall be properly addressed.

V. SOP for Total Organic Carbon in Soils

A. It is indicated that the instrument has three ranges of sensitivity; however, it is not clear whether all three ranges are interchangeable. Please clarify it. If they are not interchangeable, how the calibration to be done when the range of sensitivity is changed shall be documented in the SOP.

B. For the analysis of soil samples, what is the standard to be used for calibration and continuing calibration check ? Please identify the standard to be used, including the amount to be used in the SOP.

VI. SOP for Chloride Analysis

A. The matrix spike level specified in the SOP is not acceptable because the spike level shall determined based on the concentration of chloride detected in the sample. Please address it properly by specifying the spike level for both samples with low/no chloride detected, and sample with high concentration of chloride.

VII. SOP for Total Cyanide Analysis

A. Please identify the preparation and the concentration of the LCS standard solution.

VIII. SOP for Mercury Analysis

A. The equation used for calculating the %recovery appears to be incorrect. Please correct it accordingly.

IX. SOP for Total Kjeldahl Nitrogen (TKN)

A. This SOP is not applicable to this project, and shall be deleted.

X. Table 3 of the QAPjP

A. Please revise this table to include 1 matrix spike/matrix spike duplicate (MS/MS) for sediment sample designated for the analysis of pesticides/PCBs.

To expedit the QAPjP approval process, we strongly suggest that RPM shall forward QAS' review memo to contractors in a timely fashion (i.e., 2 days after receiving the memo). We estimate that 7 working days shall be adequate to address all of the deficiencies mentionmed above.

We also strongly suggest that, after PRP's QAPjP preparer has reviewed the QAS comments, a QAPjP meeting or conference call shall be held between QAS, RPM, QAPjP preparer, and other concerned parties, including laboratory personnel. The QAPjP meeting or conference call will improve communication between QAS and all concerned parties, and will thus minimize the number of comments on, or revision of QAPjP. As a results of the conference call/meeting, the QAPjP approval process can be shortened. Furthermore, we would like to receive a copy of the RPM's memo to QAPjP preparer if there is any deviation from QAS' original comments.